

4. E. SCHÜTT. "Centrifugale und simultane Membranverdickungen." *Jahrb. f. wiss. Bot.* xxxv. 3, 1900.

Guinardia baltica (figs. 11, 12) = *G. flaccida* (Castr.).

Leptocylindrus danicus (fig. 33) = *Rhizosolenia delicatula*, Cl. (*K. Sv. Vet.-Akad. Handl.* vol. xxxii. n. 8, 1900).

Rhizosolenia setigera (fig. 34) = *R. semispina*, Hensen.

Rhizosolenia Hensenii = *R. setigera*, Btw. P. T. C.

5. SCHRÖDER. "Das Phytoplankton des Golfes von Neapel." *Mitth. aus der zool. Stat. zu Neapel*, vol. xiv.

Asteromphalus Ralfsianus (fig. 7) seems to be a small form of *A. Hookeri*, but the fig. is not sufficient. It cannot represent *A. Ralfsianus* = *A. heptactis*, the central space being much too large.

Euodia arcuata, sp. n. (fig. 8) = *Hemidiscus cuneiformis*.
P. T. C.

IV.—On the Genus *Latrodectus*, Walck.

By FREDERICK PICKARD CAMBRIDGE, B.A., F.Z.S.

IN February 1902 a paper on this genus was read before the Zoological Society of London, and a table giving differential characters for the various species and subspecies was added.

While executing the plates for that paper it has become clear that certain characters, based on the clothing of the abdomen, are of greater importance than I had considered at the time to be the case, and I therefore publish the following table as affording a better key to the characters of the different species than that included in my paper read before the Zoological Society. These characters will all be found illustrated on the plates accompanying my paper in the 'Proceedings of the Zoological Society.'

Females.

- A. Integument of abdomen, at any rate on the lateral area, clothed with minute acanthoid spines, with or without longer bristles or spines.
- i. Abdomen clothed on the lateral area with

minute acanthoid spines, densely on the sides, more sparsely above, variable in length, but without longer and stouter spines

pallidus, O. P. Cambr.

ii. Abdomen furnished also with longer spines.

a. The additional spines short, straight, and very stout

hystrix, E. Simon.

b. The additional spines longer and curved, usually bluntly pointed.

a¹. The additional spines longer, curved in every direction. Abdomen with red spots or entirely black

tredecim-guttatus, Rossi.

b¹. The additional spines shorter, curved mainly in the same direction. The bands on abdomen never broken up into spots nor (so far as one may judge from material at hand) ever entirely black.

a². Dorsal apical red band on abdomen clothed with both acanthoid spines and longer spines

Hasseltii, Thor.

b². Dorsal band without acanthoid spines, bristles only.

a³. Bristles on dorsal band at least their own length apart

var. *indicus*, Simon.

b³. Bristles on dorsal band less than half their own length apart

var. from Loyalty Is.

B. Integument of abdomen entirely devoid of acanthoid spines, clothed only with fine silky hairs (or, in *Menavodi*, bristles).

a⁴. Central anterior eyes not larger than the lateral anteriors.

1. Bristles on abdomen of two different lengths. Abdomen with three lateral spots on each side devoid of hair

Menavodi, Vinson.

2. Bristles (or hairs) on abdomen of the same length. No lateral spots on abdomen.

a*. Size larger *mactans*, Fabricius.

b*. Size smaller.

1a. Legs much more slender. Femur iv. eight times its width

geographicus, Hasselt.

2a. Legs much stouter. Femur iv. five to six times its width

katipo, Powell.

b⁴. Central anterior eyes larger than the lateral anteriors

geometricus, C. L. Koch.

Since my former paper was read I have also received Dr. Dahl's publication on the members of this genus*. Whether the characters deduced from the differences in the hairs of the patella and tibia will bear the weight of importance laid upon them can only be judged by a comparative examination of a

* 'Sitzungs-Bericht der Gesellschaft naturforschender Freunde zu Berlin,' p. 40 (Feb. 18, 1902): "Uebersicht der *Latrodectus*-Arten," by Friedr. Dahl.

long series of examples. Species are separated, for instance, by the presence of several (six or seven) blunt bristles, or at least one, amongst many pointed bristles from those which possess no blunt bristle. If, however, they vary in this respect between six and one, there is no reason why they should not vary from six to none. So, too, with respect to colour-differences and characters based on the relative length of protarsus i., in connexion at any rate with the distinction of *L. geometricus* from *L. obscurior*, new species. In numerous examples of *L. geometricus* from the Amazons, Table Mountain, Karachi, and Jansenville one finds every variation in coloration from pale whity grey to almost jet-black, while protarsus i. varies in length from three to four times longer than the tarsus. *L. obscurior* is distinguished from *geometricus* by the variation of protarsus i., three and a quarter to three and a half times the tarsus—that of the latter species being about four times the tarsus.

The variation of colour in *L. mactans*, too, ranges from the central band and lateral slashes being red (as in the typical North-American form) to almost jet-black, so that one hesitates to separate examples even as subspecies on the strength of slight variations in this respect—as, for instance, *L. insularis*, *L. insularis insularis*, and *L. insularis lunulifer*.

The following are Dr. Dahl's new species and subspecies:—*L. obscurior*, sp. n., Madagascar; *L. insularis*, sp. n., Antilles; *L. insularis insularis*, subsp. n., St. Thomas; *L. insularis lunulifer*, subsp. n., Haiti; *L. sagittifer*, sp. n., Porto Alegre; *L. ancorifer*, sp. n., New Guinea; *L. Hahli*, sp. n., Bismarck Archipelago; *L. luzonicus*, sp. n., Philippines; *L. Stuhlmanni*, sp. n., East Africa; *L. renivulvatus*, sp. n., German S.W. Africa.

V.—Contributions from the New Mexico Biological Station.

—XIII. On the Bees of the Family Nomadidæ of Ashmead.

By T. D. A. COCKERELL and EMERSON ATKINS.

THE Nomadidæ of Ashmead (Trans. Am. Ent. Soc. xxvi. p. 64) are the parasitic bees with three submarginal cells. Ashmead himself says that they have “undoubtedly originated from other bees, through different lines of descent.” He adds:—“It is evident, however, that most of them are descendants from various Anthophorid bees, since they agree more nearly with these bees in venation and the characters of the mouth-parts than with any of the others.” If we admit